

**FORGE Energy**  
**UL 13 Nashua 3127AH**  
**API Number: 42-003-46728**

**11/06/2014**

Rig Name:

06:00 Spot Energy reverse unit,Diamond frac tank,&rig up line & guage to surface pipe,& set anchors

**11/07/2014**

Rig Name: Reeco - #92

06:00 HPJSM-Discussed trips & falls,hazards of unloading pipe off floats &loading on racks.Pinch points,and staying out of loaders way

06:30 RU-energy reverse unit,set up pipe racks,unload pipe,SDFN

**11/08/2014**

Rig Name: Reeco - #92

07:00 Waiting on Reeco-Rig

10:30 HPJSM-Discussed H2s hazard,wearing PPE protection,over head hazards,pinch points,trips & falls

11:00 Test casing to 4500psi-Held 10min-release press-ND/Blank flange,NU/BOP

13:00 Reeco rigged up-Function test BOP-press test BOP-2500psi

14:30 TIH with 4 3/4 bit,bit sub,6 collars

15:00 Tagged up 1912'-(BHA 205'+1707'tubing)RU/ powerswivel

16:30 Drill down 2 jts-@1972'cir 2 bottoms up-pull up 30',SDFN

**11/09/2014**

Rig Name: Reeco - #92

07:00 HPJSM-PPE protection,stay off floor when drilling,watch overhead & hoses when making connection,watch pinch points rolling pipe,press on lines,trips & falls. H2s

07:30 Continue drilling-Tagged DV-Tool 2003'-Drilled thru 20min,pumped 2 bottoms up,made a connection,run down 30',cleaned up 10min,lay down swivel,TOH standing back

09:00 OOH with bit,ND/BOP/NU/flange,Test casing 6200psi,held 10min,

11:30 ND/flange-NU/BOP/test 2500psi-TIH with 4 3/4 bit & 2 7/8 tubing

12:30 @ 4200'-pumped bottoms up didn't see any cuttings,TIH

15:00 @5516'-pumped sweep-bottoms up-no cuttings -TIH

17:00 @ 7058'-pumped sweep-bottoms up-no cuttings-shut in-SDFN

**11/10/2014**

Rig Name: Reeco - #92

**11/11/2014**

Rig Name: Reeco - #92

07:00 0 accidents 0 incidents 0 spills HPJSM-Discussed H2s hazard,wearing PPE protection,over head hazards,pinch points,trips & falls  
07:30 Continue TIH-Tagged FC-@ 9340'-circulate 3.5bpm-1300psi  
11:30 Circulated 2 bottoms up with beca-lub-no solids or cuttings,dirty water on 1st bottoms up,nothing on 2nd.  
13:30 pulled 3 stds ,shut well in - wait to spot acid,SDFN

#### **11/12/2014**

Rig Name: Reeco - #92

07:00 0 accidents 0 incidents 0 spills HPJSM-Discussed H2s hazard,wearing PPE protection,over head hazards,pinch points,trips & falls,extra care around acid,face shields,gloves,& lines with press.  
07:30 Run 3 stds back in,9315,Break circulation with water,pump 15%HCL acid 3bpm,total 1000gal-displace 46bbbls behind,TOH  
10:30 OOH with bit 2 7/8 tubing  
14:00 ND/BOP/NU-Frac valve-NU/BOP- Test lines 4600psi-Test casing & Frac valve-4500psi-Held 10 min-good test  
16:30 HPJSM -Discussed picking up guns&hazards Making up 3 1/8 Perf gun,all guns made up,TIH  
17:30 @ 3685' SDFN

#### **11/13/2014**

Rig Name: Reeco - #92

08:00 0 accidents 0 incidents 0 spills HPJSM-Discussed H2s hazard,wearing PPE protection,over head hazards,pinch points,trips & falls,,& lines with press.Ice in lines,and well head,ice on rig floor  
08:30 @3684' Continue TIH with perf guns  
10:00 On spot with Perf. guns, Pressure test lines 4500psi, Pressure up on casing 4400psi, bottom gun fired- @9309'-9310',10 shots-6 spf,60 degree phasing, 19 gram charge ,pressure broke back to 1200psi. Inject 1000 gal 15% HCL @ 4 BPM 1400 PSI and over flushed with 76 BBL fresh water @ 4 BPM, 1400 PSI while trying to maintain pressure to control time delay for Gun #2  
13:00 45min after bottom gun fired, Gun #2 fired @ 9160-9161'-8 shots-6 spf-60 degree phasing,19 gram charge,9 min later Gun #3 fired @9011-9012'-8 shots - 6 spf-60 degree phasing,19 gram charge,14 min.later-Gun #4 fired @ 8862'-8863'-8 shots, 6spf-60 degree phasing,19 gram charge,9 min later- Gun #5 fired @8713'-8714'- 8 shots- 6 spf-60 degree phasing, 19 gram charge.  
15:30 Casing press 410psi-Bleed off to pit,Pull 10 stds @8670',Pumped down tubing & casing,8bpm-1800psi,pumped 16bbbls.shut down,ISIP-790psi,5min-480psi,10min-450psi,RD/Warrior-Bleed press off to pit.  
16:30 POOH to 4800' Secure well and shut down for the night.

#### **11/14/2014**

Rig Name: Reeco - #92

07:00 0 accidents 0 incidents 0 spills HPJSM-Discussed H2s hazard,wearing PPE protection,over head hazards,pinch points,trips & falls,,& lines with press.Ice in lines,and well head,ice on rig floor,Hazards laying down pipe  
07:30 Casing press-0,Tubing @4800' TOH  
07:30 @ 12:30 OOH with perf-guns-All shots fired,Layed down BHA.shut well in  
13:30 RD/Energy Fishing/Rose Equipment/& Reeco Well Service.

#### **11/15/2014**

Rig Name: Reeco - #92

08:00 0 accidents 0 incidents 0 spills HPJSM-Discussed H2s hazard,wearing PPE protection,over head hazards,cold weather  
08:30 RU/Cactus Frack stack  
10:30 Cleaned out Energy Fishing reverse pit,spotted DTR flow back tank,set acid tank,filled with 130bbls.water,no leaks  
15:30 Test frac stack 250psi low-8500psi high-Held 15min-good,RD/Renegade pump,SDFN

#### **11/16/2014**

Rig Name: Reeco - #92

08:00 0 accidents 0 incidents 0 spills PJSM-H2s,trips & falls,pinch points,&ppe protection  
08:30 RU/Spartan flowback,Trans Water,& Renegade Wireline

#### **11/17/2014**

Rig Name: Reeco - #92

06:00 0 accidents 0 incidents 0 spills  
06:00 Spotted sand movers-loaded with sand  
03:00 Safety meeting , overhead loads , icy conditions , RU PRO PETRO , RENEGADE WL , TRANSWATER

#### **11/18/2014**

Rig Name: Reeco - #92

06:00 0 accidents,0 spills,0 incidents. HPJSM. Continue to rig up Pro Petro.  
08:00 Down time. Transwater equipment froze up.ProPetro missile froze up.Work to get equipment thawed and into working condition.  
16:00 HPJSM-Discussed Freezing weather,trips & falls,ice in lines,H2s,lines with press,ppe protection,  
16:30 We opened the well at 4:43pm @ 83 psi & surface csg @ 136 psi. Pump Stage #1, pumped 148,680 gals of Slickwater, 76,860 gals of 20# X-link fluid, & 4000 gals of 15% HCl acid, 13,062 gals of treated water w/ 18,952 lbs 100 mesh, 71,554 lbs 40/70 White, 107,651 lbs 20/40 White, & 32,046lbs of 20/40 Garnett. Max psi: 5930 psi, Avg psi: 4868 psi, Max rate: 77 bpm, Avg rate: 72 bpm. Approx load to rec 5,777bbls. ISIP: 1571 psi, 5 min: 1462 psi, 10 min: 1253 psi. FG: 0.76 Surface csg @167 psi.  
18:30 Stage 2- Pump Down P/U 5 ½" Frac Caged Ball Plug on Baker 20 setting tool & 3

1/8" - 5 Cluster Perf Assy. Test Lubricator to 4500 PSI. RIH & get on depth w/ MJ @ 4030'-4051'. RIH & Pump Down @ 15 BPM W/ 1300 PSI, Time Spot 1000 Gal. 15% HCL, Spot CBP @ 8469' & Finish Spotting Acid at 8 BPM W/ 900 PSI, Set CBP @ 8604', Psi up to 4500 PSI, P/U & Fire Gun #1 @ 8564'- 8565', 10 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charges, .42 EHD, P/U and Spot Gun #2 @ 8415'- 8416' & Inject 6 BBLs Acid, Fire Gun #2 @ 8415'- 8416', 8 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD, P/U & Fire Gun #3 @ 8266'-8267', 8 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD, P/U & Fire Gun #4 @ 8117'- 8118', 8 Shots, 60 Degree Phasing, 22.7 Gram Charges, .42 EHD, P/U & Fire Gun #5 @ 7968'-7969', 6 Shots, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD. POOH & LD w/ Baker 20 setting tool & 3 1/8" - 5 Cluster Perf Assy. Verified all shots fired.

20:30 Pump Brine Water through Hydration, Blender, Missile, & Frac Stack to freeze protect equip.

### **11/19/2014**

Rig Name: Reeco - #92

06:00 HPJSM

06:30 Transwater 10" Lay Flat Hose had a 10' section froze up between 2nd & 3rd inline pump, remove ice plug. Found another 15' section froze up between 4th inline pump & FTs, remove ice plug.

13:00 Pump Stage #2, pumped 160,776 gals of Slickwater, 70,308 gals of 15# X-link fluid 10,122 gals of treated water, & 4000 gals of 15% HCl acid, w/ 18,863 lbs 100 mesh, 71,932 lbs 40/70 White, 97,389 lbs 20/40 White, & 46,826 lbs of 20/40 Garnet. Max psi: 5794 psi, Avg psi: 5215 psi, Max rate: 75 bpm, Avg rate: 73 bpm. Approx load to rec 5,861 bbls. ISIP: 1746 psi, 5 min: 1143 psi, 10 min: 999 psi. FG: 0.80 Surface csg @ 125 psi.

15:00 Stage 3- Pump Down  
P/U 5 1/2" Obsidian Caged Ball Plug on Baker 20 setting tool & 3 1/8" - 5 Cluster Perf Assy. Test Lubricator to 4500 PSI. RIH & get on depth w/ MJ @ 4030'-4051'. RIH & Pump Down @ 15 BPM W/ 1800 PSI, Spot CBP @ 7859' & Spot Acid at 8 BPM W/ 1200 PSI, set CBP @ 7859'. Psi up to 4500 PSI, P/U & Fire Gun #1 @ 7819'- 7820', 10 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charges, .42 EHD, P/U and Spot Gun #2 @ 7670'- 7671' & Inject 6 BBLs Acid, Fire Gun #2 @ 7670'- 7671', 8 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD, P/U & Fire Gun #3 @ 7521'- 7522', 8 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD, P/U & Fire Gun #4 @ 7372'- 7373', 8 Shots, 60 Degree Phasing, 22.7 Gram Charges, .42 EHD, P/U & Fire Gun #5 @ 7223'-7224', 6 Shots, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD. Pump away acid w/ 25 BFW. POOH & LD w/ Baker 20 setting tool & 3 1/8" - 5 Cluster Perf Assy. Verified that all shots had been fired.

16:00 Pump Stage #3, pumped 3,117gals of Slickwater, 237,804 gals of 15# X-link fluid 1,470 gals of treated water, & 4000 gals of 15% HCl acid, w/ 19,296 lbs 100 mesh, 73,123 lbs 40/70 White, 97,827 lbs 20/40 White, & 32,152 lbs of 20/40 Garnet. Max psi: 6249 psi, Avg psi: 4,307 psi, Max rate: 75 bpm, Avg rate: 68 bpm. Approx load to rec 7,112bbls. ISIP: 5710 psi, Sanded off on .20#, flowed back till to bottoms

up,started back fracing,pumped X-link fluid remainder of job,sanded off 120bbls into flush.was able to flush the remaining 100bbls @ 3bpm. Was able to increase rate slowly. was pumping 9bpm 5900psi pressured out 6200psi,had pumped 100bbls after top perf was cleared ,tried flowback,opened to pit,press released no flow. press up 4500psi,tried surging press,no flow,pumped on casing,press up,tried surging ,still no flow,SDFN

22:00 Pump Brine Water through Hydration, Blender, Missile, & Frac Stack to freeze protect equip.

## **11/20/2014**

Rig Name: Reeco - #92

07:00 0 accidents,0 spills,0 incidents. HPJSM.

07:30 @ 07:40,WHP-270psi,open well started flowback,flowing to test tank @2bpm flowed total 400bbls.-was flowing @ 4bpm when when we SD.Attempted to establish rate 2bpm-then 4bpm,press never lined out,press up to 6100psi,SD-closed in

11:30 RD/Propetro,Renegade Wireline

14:00 MIRU 1/2 pits, Renegade, Enersafe, & Spartan's Plug Catcher. Fill up 1/2 pits w/ FW. MIRU RedZone CTU & pump. ND 5 1/8" 10K WL Adapter. NU 5 1/8" 10K x 5 1/8" 15K spool & 5 1/8" 15K BOP. Cycle test Rams on BOP. PU 40' 5 1/8" 15 Lubricator. Pull test 2" connector to 30K. Fill CT Reel w/ xx bbls. Psi test CT & connector to 3,000 psi.

18:30 Made up Cornell BHA,test motor 3.5bpm-NU/coil to frac stack,test lubricator & lines to 4500psi

19:00 REPAIR LEAKS , PRESSURE TEST 4500 PSI

19:45 OPEN WH W/ 800 PSI , 20:00 AT 150' , CIRC PRESS 1500 PSI , WH 350 PSI , 1 BPM IN AND OUT

20:00 20:30 AT 1500' , CIRC PRESS 1150 PSI , WH 300 PSI , 1 BPM IN AND OUT , RIH 45'-50' FPM , 21:00 AT 3000' , CIRC PRESS 5200 PSI , WH 550 PSI , 3 ½ BPM IN AND OUT , PUMP 10 BBL SWEEP

21:00 21:45 AT 4000' , WT CK , CIRC PRESS 4800 PSI , WH 500 PSI , 3 ½ BPM IN AND OUT , PUMP 10 BBL SWEEP , 22:00 AT 5000' , CIRC PRESS 4900 PSI , WH 700 PSI , 3 ½ BPM IN AND OUT , PUMP 10 BBL SWEEP , 22:30 AT 6000' , CIRC PRESS 4700 PSI , WH 550 PSI , 3 ½ BPM IN AND OUT , PUMP 10 BBL SWEEP

22:30 23:00 AT 7000' , CIRC PRESS 4900 PSI , WH 550 PSI , 3 ½ BPM IN AND OUT , PUMP 10 BBL SWEEP , 23:15 STOP AT 7830' , CIRC PRESS 5400 PSI , WH 500 PSI , 3 ½ BPM IN AND OUT , PUMP 10 BBL SWEEP , 10 BBL SPACER , 10 BBL SWEEP , WAIT ON SWEEPS

23:45 23:45 SWEEPS OUT OF BIT - PLUS 10 MIN. , POOH W/ CT AT 30'-40' FPM , CIRC PRESS 4700 PSI , WH 550 PSI , 3 ½ BPM IN AND OUT. PUMP 10 BBL SWEEP TO COME OUT AT BOC

11/20/2014

01:15 AT 4000' , CURVE SWEEP COMING BACK , HEAVY SAND , CIRC PRESS 5000 PSI , WH 500 PSI , 3 ½ BPM IN AND OUT , SAND CAME BACK FOR 30 MIN , CIRCULATED CLEAN RETURNS FOR 15 MIN.

02:00 SD PUMP , LINE UP TO PUMP DOWN CT AND BACKSIDE , 02:25 START INJECTION TEST , 02:28 2 BPM AT 1400 PSI , 02:36 3 BPM AT 4000 PSI , SD PUMP , LINE UP TO CIRCULATE

02:45 RIH W/ CT , CIRC PRESS 4500 PSI , WH 550 PSI , 3 ½ BPM IN AND OUT. 04:10 TAG PLUG AT 7890' - SHOULD HAVE BEEN 7859' , PLUG MOVING IN 1 MIN. , CIRC PRESS 4800 PSI , WH 300 PSI , 3 ½ BPM IN AND OUT. 04:30 STOP AT 8570' , CIRC PRESS 5300 PSI , WH 300 PSI , 3 ½ BPM IN AND OUT , PUMP 10 BBL SWEEP , 10 BBL SPACER , 10 BBL SWEEP , WAIT ON SWEEP TO CLEAR BIT PLUS 10 MIN.

05:00 POOH AT 30'-40' FPM , PUMP 10 BBL SWEEP TO COME OUT AT 7000' , PUMP 10 BBL SWEEP TO COME OUT AT BOC.

### **11/21/2014**

Rig Name: Reeco - #92

06:00 Made Shift change & HPJSM.

06:30 Stop @ 4000' & wait sweep to get to surface, wait 25 min w/circ psi @ 4800 psi, WH psi @ 300 psi. POOH & bump up BHA.

08:00 Pump 20 bbl sweep & flush w/ 220 BFW @ 8.5 BPM, 5400 psi. SD.

09:30 Open well @ 600 psi. Bring pump to 1 BPM, circ psi @ 3200 psi, WH psi @ 300 psi. RIH w/ BHA on CT @ 110 ft/min to 3900', & got WT CK 9K. Slowed down to 40 ft/min & continue in hole @ 3.5 BPM in & out, circ psi @ 4850 psi, WH psi @ 290 psi.

11:30 Tag up plug # 1 @ 8600' w/ circ psi @ 4610 psi, WH psi @ 290 psi. Drill thru Remainder of Plug #1 that was pushed below stage #2 Perfs, and Plug #2 in 50 min, WOB 3-4K, 3.5 BPM in & out. Pump 10 bbl sweep & continue to RIH.

13:15 Tag PBTD @ 9349' w/ circ psi @ 4610 psi, WH psi @ 290 psi, 3.5 BPM in & out. PU 10', pump 20 sweep, 10 bbl spacer, 20 bbl sweep, & circ while sweep makes it to the end of reel.

14:00 Sweeps got to end of reel & POOH 35 FPM w/ circ psi @ 4600 psi, WH psi @ 290 psi, 3.5 BPM in & out. Showing good returns @ plug catcher. Pump 10 bbl sweep @ 7000' & 5800' to meet at EOC. OOH.

16:00 Open well @ 80 psi. Perform Injection Test, 2 BPM, 400 psi, 4 BPM, 500 psi, 6 BPM, 800 psi, 10.5 BPM, 1000 psi. Pump 20 bbl sweep & flush w 240 BFW @ 10.5 BPM, 1200 psi. ISIP: 1000 psi. SWI.

17:00 Disassemble Cornell's BHA.

17:30 RDMO CTS, Renegade, Enersafe, & Spartan's Plug Cather.

### **11/22/2014**

Rig Name: Reeco - #92

07:00 HPJSM

07:15 MIRU Renegade Torque Equip.

07:30 Torque up WL Adapter Flange.

08:30 RDMO Renegade Torque Equip.

**11/23/2014**

Rig Name: Reeco - #92

**11/24/2014**

Rig Name: Reeco - #92

06:30 HPJSM

07:00 MIRU WES & Renegade WL.

09:00 Test lines to 6000 psi. Establish rate @ 12 BPM, 1250 psi.

09:30 Stage 4- Pump Down

P/U 5 1/2" Obsidian Cage Ball Plug on Baker 20 setting tool & 3 1/8" - 5 Cluster Perf Assy. Test Lubricator to 4500 PSI. RIH & get on depth w/ MJ @ 4030'-4051'. RIH & Pump Down @ 11 BPM W/ 1250 PSI, Spot CBP @ 7114' & Spot Acid at 8 BPM W/ 950 PSI, set CBP @ 7114'. Psi up to 4500 PSI, P/U & Fire Gun #1 @ 7074'- 7075', 10 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charges, .42 EHD, P/U and Spot Gun #2 @ 6925'- 6926' & Inject 6 BBLs Acid, Fire Gun #2 @ 6925'- 6926', 8 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD, P/U & Fire Gun #3 @ 6776'-6777', 8 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD, P/U & Fire Gun #4 @ 6627'- 6628', 8 Shots, 60 Degree Phasing, 22.7 Gram Charges, .42 EHD, P/U & Fire Gun #5 @ 6478'-6479', 6 Shots, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD. Pump away acid w/ 25 BFW. POOH & LD w/ Baker 20 setting tool & 3 1/8" - 5 Cluster Perf Assy. Verified that all shots had been fired.

12:00 RDMO Renegade WL & WES.

**11/25/2014**

Rig Name: Reeco - #92

**11/26/2014**

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**11/27/2014**

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**11/28/2014**

Rig Name: Reeco - #92

**11/29/2014**

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**11/30/2014**

Rig Name: Reeco - #92

**12/01/2014**

Rig Name: Reeco - #92

**12/02/2014**

Rig Name: Reeco - #92

**12/03/2014**

Rig Name: Reeco - #92

**12/04/2014**

Rig Name: Reeco - #92

**12/05/2014**

Rig Name: Reeco - #92

06:00 HPJSM  
06:30 Transwater tied into FTs & filled tanks.  
10:00 ProPetro set 2 SandKings.  
11:00 Offload Sand.  
03:00 MIRU Renegade WL, Renegade test pump, & ProPetro.

**12/06/2014**

Rig Name: Reeco - #92

06:00 Continue to RU ProPetro.  
08:00 Prime up pumps & roll acid. Test lines to 7400 psi. Set kill switches from 5800-6100 psi & pop off @ 6100 psi.  
09:00 Pump Stage #4, pumped 74,592 gals of Slickwater, 189,462 gals of 15# X-link fluid, 4000 gals of 15% HCL acid, w/ 18,795 lbs 100 mesh, 72,266 lbs 40/70 White, 99,003 lbs 20/40 White, & 44,800 lbs of 20/40 Garnet. Max psi: 6183 psi, Avg psi: 5301 psi, Max rate: 78 bpm, Avg rate: 60 bpm. Approx load to rec 6,492 bbls. ISIP: 3039 psi, 5 min: 1727 psi, 10 min: 1650 psi. FG: 1.07. Surface csg @ 0 psi.  
11:30 Stage 5- Pump Down P/U 5 1/2" Frac Caged Ball Plug on Baker 20 setting tool & 3 1/8" - 5 Cluster Perf Assy. Test Lubricator to 4500 PSI. RIH & get on depth w/ MJ @ 4030'-4051'. RIH & Pump Down @ 15 BPM W/ 3300 PSI, Time Spot 1000 Gal. 15% HCL, Spot CBP @ 6369' & Finish Spotting Acid at 8 BPM W/ 2000 PSI, Set CBP @ 6369', Psi up to 4500 PSI, P/U & Fire Gun #1 @ 6329'- 6330', 10 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charges, .42 EHD, P/U and Spot Gun #2 @ 6180'- 6181' & Inject 6 BBLS Acid, Fire Gun #2 @ 6180'- 6181', 8 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD, P/U & Fire Gun #3 @ 6031'-6032', 8 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD, P/U & Fire Gun #4 @ 5882'- 5883', 8 Shots, 60 Degree Phasing, 22.7 Gram Charges, .42 EHD, P/U & Fire Gun #5 @ 5733'-5734', 6 Shots, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD. POOH & LD w/ Baker 20 setting tool & 3 1/8" - 5 Cluster Perf Assy. Verified all shots fired.  
13:00 Pump Stage #5, pumped 75,558 gals of Slickwater, 163,212 gals of 15# X-link fluid, 4000 gals of 15% HCL acid, w/ 19,248 lbs 100 mesh, 71,798 lbs 40/70 White, 98,966 lbs 20/40 White, & 44,873 lbs of 20/40 Garnet. Max psi: 5932 psi, Avg psi: 5251 psi, Max rate: 75 bpm, Avg rate: 56 bpm. Approx load to rec 5,859 bbls. ISIP: 3205 psi, 5 min: 2334 psi, 10 min: 2145 psi. FG: 1.1. Surface csg @ 0 psi.



15:00 Stage 6- Pump Down P/U 5 1/2" Frac Caged Ball Plug on Baker 20 setting tool & 3 1/8" - 5 Cluster Perf Assy. Test Lubricator to 4500 PSI. RIH & get on depth w/ MJ @ 4030'-4051'. RIH & Pump Down @ 15 BPM W/ 3100 PSI, Time Spot 1000 Gal. 15% HCL, Spot CBP @ 5624' & Finish Spotting Acid at 8 BPM W/ 2000 PSI, Set CBP @ 5624', Psi up to 4500 PSI, P/U & Fire Gun #1 @ 5584'- 5585', 10 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charges, .42 EHD, P/U and Spot Gun #2 @ 5435'- 5436' & Inject 6 BBLS Acid, Fire Gun #2 @ 5435'- 5436', 8 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD, P/U & Fire Gun #3 @ 5286'-5287', 8 Shots, 6 SPF, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD, P/U & Fire Gun #4 @ 5137'- 5138', 8 Shots, 60 Degree Phasing, 22.7 Gram Charges, .42 EHD, P/U & Fire Gun #5 @ 4988'-4989', 6 Shots, 60 Degree Phasing, 22.7 Gram Charge, .42 EHD. POOH & LD w/ Baker 20 setting tool & 3 1/8" - 5 Cluster Perf Assy. Verified all shots fired.

16:00 WO Sand.

18:00 Pump Stage 6, pumped 195,762 gals of Slickwater, 69,006 gals of 15# X-link fluid, 4000 gals of 15% HCL acid, w/ 22,157 lbs 100 mesh, 71,796 lbs 40/70 White, 98,211 lbs 20/40 White, & 45,387 lbs of 20/40 Garnet. Max psi: 5532 psi, Avg psi: 5129 psi, Max rate: 83 bpm, Avg rate: 77 bpm. Approx load to rec 6,397 bbls. ISIP: 2897 psi, 5 min: 2413 psi, 10 min: 2288 psi. FG: 1.04. Surface csg @ 0 psi. SWI. TLTR: 37,527 bbls.

20:00 RDMO Renegade WL, Rengade Test Pump, Transwater, & ProPetro.

22:00 22:00 SPOT 1/2 PITS , MIRU SPARTAN , RENEGADE , ENERSAFE

00:00 00:00 RZ ON LOCATION , 00:30 RZ NIPPLE UP 4 1/16" 10K BOP

01:00 01:00 FUNCTION TEST BOP , 02:00 PULL TEST CONNECTOR 20K , LOADED 2" CT W/ 53 BBLS , PRESSURE TEST CONNECTOR 3000 PSI , MAKE UP CORNELL BHA , 02:30 TEST MOTOR 3 BPM AT 5300 PSI , MAKE UP 4 1/16" BOP TO WH

03:00 03:00 SAFETY MEETING / JSA , DISCUSSED PRESSURE , H2S , WIND DIRECTION , PROPER PPE

03:30 03:30 PRESSURE TEST 4500 PSI

04:00 04:00 OPEN WH W/1000 PSI , 04:15 AT 200' , CIRC PRESS 2000 PSI , WH 1250 PSI , 1 BPM IN AND OUT

04:15 05:10 AT 4000' , WT CK 8K , CIRC PRESS 4950 PSI , WH 1000 PSI , 3.5 BPM IN AND OUT , 05:45 TAG AT 5586' , CIRC PRESS 5080 PSI , WH 1150 PSI , 3.5 BPM IN AND OUT , WOB 2K

## **12/07/2014**

Rig Name: Reeco - #92

06:00 07:00 0 Accidents. 0 Incidents. 0 Spills. Hold JAS/ Safety Meeting. DRLG PLUG #1 , CIRC PRESS 5300 PSI , WH 1150 PSI , 3.5 BPM IN AND OUT. Making no Hole. WOB- 1-2K. Motor Stalls out 3 times Cont to PU & work back down. Drill down to 5600' in 4 hrs. Circ press- 5500 psi. WHP- 1100 psi. 3.5 bpm in/out.

09:30 Sweep on surface. NO plug parts, no sand in plug catcher or screen. POOHWCT to look @ bit & motor.

11:00 OOHWCT & bit. Edges of bit that holds cones shows wear msrks & sharp edges, like

tight Csg.

12:00 RIH w/4 5/8" Bit & Motor.

13:00 Perform Wt CK @ 4000' 9K up, 4k down. Circ press. -1500. WHP- 900 3.5 bpm in/out.

14:00 Tag @ 5609'. Stall motor 6 times. Pick up each time & feather back down to 5909'.Circ press- 4800. WHP- 900. 3.5 bpm in/out. WOB 1-2k. Pulled 25-28k over 1 time to free up. Seems to have a 1-2' tight zone @ 5609'-11'. Run 10 bbl sweep.

15:00 Start to POOHWCT. Got sweep returns back. 1 handful of plug parts. PU to 5150'. Decided to RIH & try drill more. RIH Tag Plug @ 5609'.Circ press- 4800. WHP- 900. 3.5 bpm in/out. WOB 1-2k.

16:00 DTP. Drill down to 5623'. Run 10 bbl sweep. POH to 5581'. NO drag up or down. Circ press- 5700. WHP- 800. 3.5 bpm in/out. WOB 1-2k. 3.5 bpm in/out. 32/64 choke. Cont in hole to 2nd plug @ 6369'. DTP- 25 min. WOB- 3k. Circ press- 5600. WHP- 800. 3.5 bpm in/out. 32/64 choke. Pump 10 bbl sweep. Recovered 2 handfuls of plug parts from previous sweep.

17:00 17:35- RIH Tag Fill @ 6900'. Wash down to 3rd Plug @ 7100'. Circ press- 5600. WHP- 750. 3.5 bpm in/out. WOB 3k. 3.5 bpm in/out. 32/64 choke.

18:30 18:40- Drill Thru Plug in 20 min. Circ press- 6490. WHP- 690. 3.5 bpm in/out. 32/64 choke. Pump 10-10-10 Sweep. Cont in hole to PBTB.

19:00 19:00 RIH W/ CT , 19:15 STOP AT 9345' , PU TO 9330' , PUMP 10 BBL SWEEP , 10 BBL SPACER , 10 BBL SWEEP , 19:30 CIRC PRESS 5600 PSI , WH 550 PSI , 3.5 BPM IN AND OUT , WAIT ON SWEEPS TO CLEAR BIT , EMPTY PLUG CATCHER , FAIR PLUG PARTS , LEL 8 , H2S 0

19:45 19:45 CIRC PRESS 5300 PSI , WH 625 PSI , 3.5 BPM IN AND OUT , SWEEPS CLEARED BIT PLUS 10 MIN , POOH W/ CT AT 35 - 45 FPM , 20:40 AT 7030' , SWEEP OUT OF BIT , ON BTM SWEEPS AT SURFACE , CIRC PRESS 5400 PSI , WH 500 PSI , 3.5 BPM IN AND OUT , GOOD PLUG PARTS IN PLUG CATCHER , 21:15 AT 5300' CURVE SWEEP OUT OF BIT , NOTHING SEEN FROM EARLIER TIGHT SPOT , CIRC PRESS 5400 PSI , WH 600 PSI , 3.5 BPM IN AND OUT

21:15 21:30 SWEEP FROM 7000' AT SURFACE

21:30 21:30 SWEEP FROM 7000' AT SURFACE , 21:50 AT 3850' , CIRC PRESS 5100 PSI , WH 550 PSI , 3.5 BPM IN AND OUT , WAIT ON CURVE SWEEP. 22:00 CURVE SWEEP AT SURFACE , HEAVY SAND , CIRC. CLEAN , CIRC PRESS 5100 PSI , WH 550 PSI , 3.5 BPM IN AND OUT

22:15 22:15 POOH W/ CT , 22:45 OUT OF HOLE W/ CT , SHUT-IN WELL

22:45 23:00 BREAK AND LD CORNELL BHA (4 5/8" BIT LOOKED NEW)

23:00 RD RZ , RENEGADE , ENERSAFE , CORNELL 01:15 RZ , ENERSAFE , RENEGADE , CORNELL , OFF LOCATION

01:15 01:15 SPARTAN RD PLUG CATCHER , RU SAND CATCHER AND RU LINES TO FLOW BACK TANK.05:30 SAFETY MEETING / JSA , DISCUSSED H2S , WIND DIRECTION , MUSTER STATIONS

05:45 05:55 OPEN TO MANIFOLD W/ 500 PSI , 06:00 OPEN ON 29/64" CHOKE W/ 430

## PSI

### 12/08/2014

Rig Name: Reeco - #92

06:00 06:00 0 Accidents. 0 Incidents. 0 Spills. Hold JSA/Safety Meeting. OPEN W/ 430 PSI ON 29/64" CHOKE.

08:00 29/64 choke. WHP- 300 psi. BPH- 100 bbls. TBR- 209. CHL- 11,852. H2S- 0 ppm. Sand- 1 cup. Oil- 0 bbls.

10:00 32/64 choke. WHP- 220 psi. BPH- 110 bbls. TBR- 465. CHL- 11,852. H2S- 0 ppm. Sand- 1 cup. Oil- 0 bbls.

12:00 34/64 choke. WHP- 180 psi. BPH- 106 bbls. TBR- 827. CHL- 11,852. H2S- 0 ppm. Sand- 1 cup. Oil- 0 bbls.

14:00 34/64 choke. WHP- 140 psi. BPH- 97 bbls. TBR- 922. CHL- 11,852. H2S- 0 ppm. Sand- 1 cup. Oil- 0 bbls.

16:00 34/64 choke. WHP- 120 psi. BPH- 97 bbls. TBR- 1,102. CHL- 11,852. H2S- 0 ppm. Sand- 1 cup. Oil- .02% cut in sample bottle. (Trace)

18:00 34/64 choke. WHP- 100 psi. BPH- 102 bbls. TBR- 1,395. CHL- 11,852. H2S- 0 ppm. Sand- 1 cup. Oil- .02% cut in sample bottle.(Trace)

20:00 34/64 choke. WHP- 85 psi. BPH- 72 bbls. TBR- 1,533. CHL- 11,852. H2S- 0 ppm. Sand- 1 cup. Oil- .02% cut in sample bottle.(Trace)

22:00 22:00 36/64 choke. WHP- 50 psi. BPH- 60 bbls. TBR- 1,668. CHL- 11,852. H2S- 0 ppm. Sand- 1/2 cup. Oil- .02% cut in sample bottle.(Trace)

00:00 00:00 20 psi. on Full opened choke , flowing 50 BPH , CL- 11,852. H2S- 0 ppm. Sand- 1/3 coffee cup. Oil- .02% cut in sample bottle.(Trace) 02:00 20 psi. on Full opened choke , flowing 61 BPH ,CL- 11,852. H2S- 0 ppm. Sand- 1/3 coffee cup. Oil- .02% cut in sample bottle.(Trace)

02:00 04:00 20 psi. on Full opened choke , flowing 66 BPH , CL- 11,852. H2S- 0 ppm. Sand- 1/3 coffee cup. Oil- .02% cut in sample bottle.(Trace)

04:00 05:00 20 psi. on Full opened choke , flowing 49 BPH , CL- 11,852. H2S- 0 ppm. Sand- 1/3 coffee cup. Oil- .02% cut in sample bottle (Trace) TTL RECOVERY LAST 24 HRS 1994 BBLS , LOAD 37527 BBLS , LOAD REMAINING 35533 BBLS

05:00 06:00 10 psi. on Full opened choke , flowing 52 BPH , CL- 11,852. H2S- 0 ppm. Sand- 1 coffee cup. Oil- .02% cut in sample bottle.(Trace)

### 12/09/2014

Rig Name: Reeco - #92

06:00 0 Accidents. 0 Incidents. 0 Spills. Hold JSA Safety Meeting. ^4/64 Choke. WHP- 10 psi. BPH Water- 52 bbls. Oil- Trace. TBR 2,046 bbls. Chl- 11,852 ppm. H2S- 25 ppm. Sand- 1/2 Cup.07:30 64/64 choke. WHP- 10 psi. BPH Water- 27 bbls. Oil- Trace. TBR 2,123 bbls. Chl- 11,852 ppm. H2S- 25 ppm. Sand- 1/2 Cup. Shut In Well. Release FB Crew. TLTR- 37,527 bbls. 0.056% Total Recovered.

10:00 RU Superior Hydrovac. Clean & empty 2- 1/2 Pits on location.

### 12/10/2014

Rig Name: Reeco - #92

- 13:00 0 Accidents. 0 Incidents. 0 Spills. JSA/Safety Meeting. DISCUSSED WIND BLOWING TO WEST , DISCUSSED WIND DIRECTIONS , MUSTER POINTS , ESCAPE PLAN. SIP= 140 psi. Blow down well. Wait on DSA Spool(7" pin x 7"-5).
- 15:30 Blow down well to 75 psi. Kill well w/ 75 bbls Brine water. Trickle down Csg as ND FSA & NU BOP. Pumped total of 93 bbls. Secure well. RD. MOL.

**12/16/2014**

Rig Name: AAA #116

- 14:30 MIRU AAA #116 WSU - SPOT PIPE RACKS AND LOAD TUBING ON RACKS

**12/17/2014**

Rig Name: AAA #116

- 07:00 HPJSM - JSA REVIEW
- 07:30 HPJSM - RIH WITH 2.875" OD BULL PLUG: 4120.66', 2 875" OD PC MUD JOINT X 2: 4120.21', 4.0" OD DESANDER: 4054.69', 4.56" OD SENSOR: 4049.89', 4.56" OD MOTOR: 4047.69', 4" OD SEALS: 4024.34', 4" OD G/S INTAKE: 4016.14', 4" OD G/S: 4013.59', 4" OD SFNPSH PUMP: 4011.24', 4" OD SF 2400 PUMP: 3999.24', 4" OD SF 2400 PUMP: 3977.44', 2.875" OD BOH DISCHARGE: 3959.84', 2.875 OD SEAT NIPPLE: 3959.34, 122 JTS 2 7/8" OD 6.5# J-55 IPC TUBING: 3958.24', 1 JTS 6.5# J-55 TUBING SUB: 25.20', 7" OD TUBING HANGER: 21.20', BOP TO HANGER: -4.6': 20.40, RKB: 25' - M/U 14 MONEL BANDS ON ESP AND 366 MONEL BANDS ON TUBING - SPACE OUT AND MAKE LOWER PIGTAIL SPLICE - LAND HANGER - R/D BOP AND R/U MASTER VALVE AND FLOW TEE ABOVE VALVE - RUN LINE TO PITS - FINISH WIRING DRIVE BOX - START VSD WITH PIP OF 1796 PSI - CHECK ROTATION @ 45 HZ AND 200 PSI ON TUBING - FLOWED 5 MINUTES AND SHUT DOWN VSD - CLOSED MASTER VALVE - SDFN

**12/18/2014**

Rig Name: AAA #116

- 07:00 HPJSM - RDMO UL 13 NASHUA 3127AH

**02/10/2015**

Rig Name: AAA #116

- 07:00 HPJSM
- 07:30 MIRU AAA WSU #116
- 10:00 SET UP PIPE RACKS ON DOVER 4426H AND KENT 415H

**02/11/2015**

Rig Name: AAA #116

- 07:00 HPJSM
- 07:30 R/D WELLHEAD AND R/U BOP
- 09:00 POOH WITH BULL PLUG, 2 JTS 2 7/8" PC TUBING, DESANDER, SENSOR,

ESP MOTOR, SEALS, GS/INTAKE, GS/UPPER TANDEM, 3 SF 2700 PUMPS, BOH, SEAT NIPPLE, 122 JTS 2 7/8" IPC TUBING, 2 7/8" TBG SUB AND TUBING HANGER -

12:30 M/U BIT AND SCRAPER AND RIH WITH 122 JTS 2 7/8" TBG TO 4995' - POOH WITH BIT, SCRAPER, AND TUBING - CLOSE BLIND RAMS AND SECURE WELL FOR NIGHT

## **02/12/2015**

Rig Name: AAA #116

07:00 HPJSM

07:30 P/U AND RIH WITH SUMMITT ESP ASSEMBLY: SENSOR: 2.20', MOTOR: 18.60', SEALS: 8.20', GS/INTAKE: 2.55', GS/UPPER TANDEM: 2.35', 1750 SERIES PUMP 1: 13.40', 1750 SERIES PUMP 2: 21.55', 1750 SERIES PUMP 3: 21.85', BOH/DISCHARGE: 0.50', 2 7/8" TUBING SUB: 4.00', SEAT NIPPLE: 1.10', AFTER MAKING UP TWO CANON CLAMPS, SUMMITT'S IMPACT DRIVER BROKE -

10:30 TECHNICIAN DROVE TO ODESSA TO GET ANOTHER TOOL (2 HRS) -

12:30 STARTED RIH AND AFTER RIH 10 STANDS, TOOL BROKE AGAIN - WIND BLOWING IN EXCESS OF 20 MPH AND HIGHER GUSTS - SHUT DOWN FOR DAY AND ALLOW SUMMITT TO GET NEW IMPACT DRIVER - CLOSE REDA RAMS AND OPEN CASING TO BATTERY

## **02/13/2015**

Rig Name: AAA #116

07:00 HPJSM

07:30 CONTINUE RIH MAKING UP CANON CLAMPS AT EACH COLLAR UNTIL 3985' (26 CLAMPS) AND TWO MONEL BANDS BETWEEN CLAMPS - FROM 3985' TO SURFACE USED 3 MONEL BANDS PER JOINT - WITH SIX JOINTS OF TUBING REMAINING BEFORE ESP ASSEMBLY IS ACROSS TANGENT, SUMMITT TECH INFORMED ME THAT HE ONLY HAD APPROX. 80' OF CABLE ON SPOOLER - CUT CABLE WITH 80' ON SPOOLER AND SENT SPOOLER IN TO ODESSA TO GET ENOUGH CABLE TO SPLICE AND CONTINUE RIH TO SET ASSEMBLY ACROSS TANGENT -

10:00 SPOOLING TRAILER SENT TO ODESSA TO GET MORE CABLE ON SPOOL - WHEN SPOOLER RETURNED MADE SPLICE (DOWN TIME NOT CHARGED)

15:00 RIH 6 JOINTS (3 MONEL BANDS PER JOINT) - MADE LOWER PIGTAIL SPLICE - LANDED HANGER - R/D BOP - R/U WELLHEAD - ESP COMPLETION: SENSOR: 2.2'/4827', ESP MOTOR: 18.60'/4827.26', SEALS: 8.2'/4806.66, GS/INTAKE: 2.55'/4798.46', GS/UPPER TANDEM: 2.35'/4795.91', 1750 SERIES PUMP 1: 13.40'/4793.56', 1750 SERIES PUMP 2: 21.55'/4780.16', 1750 SERIES PUMP 1: 21.85'/4758.61', BOH/DISCHARGE: .5'/4736.76', 2 7/8" 6.5# J-55 IPC TUBING SUB: 4'/4736.26', SEAT NIPPLE: 1.10'/4732.26', 146 JTS 2 7/8" 6.5# J-55 IPC TUBING: 4705.36'/4731.16', TUBING HANGER: 0.8'/25.80'

16:30 PIP: 804 PSI - CHECKED ROTATION - FLUID TO SURFACE IN 15 MINUTES - SHUT WELL IN - SECURED WELL FOR NIGHT

**04/10/2015**

Rig Name: AAA #116

10:00 HPJSM

10:30 - MIRU AAA WSU - R/D WELL HEAD AND R/U BOP -

12:30 PULL HANGER TO WORK FLOOR - R/U CABLE SHEAVE TO TUBING BOARD - CONTINUE POOH WITH 146 JTS 2 7/8" TUBING (HAD 4 POINTS DRAG STARTING OUT OF HOLE BUT RETURN TO STRING WEIGHT AFTER GETTING INTO VERTICAL), SEAT NIPPLE, 6' TUBING SUB, BOH (GOOD), PUMP 3 (STIFF), PUMP 2 (STIFF), PUMP 1 (STIFF), TOP INTAKE/GS (STIFF), BOTTOM INTAKE/BS (STIFF), SEAL (TURNED FREE, DISCOLORED OIL), MOTOR (TURNED FREE, CLEAN OIL), SENSOR (GOOD) -

15:30 M/U BIT AND SCRAPER - RIH WITH 153 JTS TUBING TO 4932' - POOH AND LAY DOWN ON PIPE RACK ALL TUBING -

18:30 R/D BOP - SET HANGER BACK IN ADAPTER BOWL WITH MINI MANDRIL AND SAFETY VALVE -